

# Henry E. Sigerist: From the Social Production of Disease to Medical Management and Scientific Socialism

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HENRY E. SIGERIST DID MORE THAN ANY OTHER individual to establish, promote, and popularize the history of medicine in America. He made the history of medicine relevant to contemporary concerns and greatly broadened its appeal beyond the small company of scholars, collectors, and amateur “gentlemen” physicians who had been interested in the field (Miller 1980). As professor of the history of medicine at Johns Hopkins, he made the history of medicine “more comprehensive, more comprehensible, more significant in human and social terms” (Stevenson 1958).

Here, I will be concerned with Sigerist’s analysis of the social production of disease and its relation to his proposals for the reform of medical care. Sigerist’s work on the history of disease has more radical implications than much of his more overtly political writing on the sociology of medicine and medical care organization. Sigerist articulated two, largely distinct, positions in relation to the politics of health and disease. On the one hand, his work on the history of disease suggested that the incidence of disease was generated by social and economic conditions, and therefore had to be addressed by social and economic reorganization, promoted in part by a “people’s war” for health; on the other hand, much of Sigerist’s active political and sociological work concentrated on the more limited (if still ambitious) goal of changing the organization, delivery, and financing of health services. Sigerist’s dual vision of the physician’s role—as participant

in or leader of the “people’s war” for health, and as the provider of individualized preventive and curative care—was mediated by the politics of the possible. These positions were connected for Sigerist by his view of the politics of science and scientific medicine: socialism represented the form of society in which the benefits of science would be distributed to all.

Some of the apparent inconsistencies in Sigerist’s writings stem from his simultaneous involvement in theoretical work and in the practical political struggles of his day; while he permitted himself revolutionary visions, he committed his energy to the more limited goals of the liberal reform movements of the 1930s and 1940s. The first represented a long-term or ideal future; the second, the goals that seemed politically feasible in the United States at that time. Sigerist’s engagement in medical reform has already been discussed by a number of the major participants who trace their own involvement at least in part to his influence (Falk 1958; Roemer 1958a, 1958b; Terris 1975).

Sigerist’s views and politics also changed over time. His earliest papers in the 1920s in Germany were somewhat abstract explorations of the relation between disease and culture; as the depression underlined the problems of poverty and unemployment in the United States in the 1930s, he addressed more specific connections between disease and social conditions. Sigerist’s travels in the late 1930s and early 1940s—to South Africa, India, and especially the Soviet Union—also clearly influenced his work. In Sigerist’s final work in the history of medicine, he attempted to synthesize his knowledge and ideas into a single, comprehensive account of the historical relation of medicine to civilization (Sigerist 1951; 1961). Sigerist died in Switzerland while writing the second book of his projected eight-volume history of medicine, so this ambitious effort was never completed.

Contemporary readers of Sigerist’s work may have difficulty bridging the apparent gap between his analysis of the problem of disease as caused by social conditions and his advocacy of universal access to medical care as the solution. One major question in the politics of medical care is whether the provision of medical services has very much of an impact on people’s health, at least in comparison to such factors as nutrition, housing, sanitation, education, and employment. The controversy, while not new, has recently been provoked by the work of McKeown (1976) and others who have asserted that medical

care has been only one, and probably not the most important, factor in improving health. Sigerist's views on the social causation of disease certainly pointed in this direction, while his sociology of medicine retained a central role for medical care and, by extension, for the medical profession. As Charles Rosenberg (1986) has noted, many of his generation saw no conflict between the call for radical social change and the plea for a more equitable distribution of the benefits of scientific medicine.

Sigerist and many of his contemporaries perceived science and medicine as a positive and liberating force; science was constrained under capitalism, perverted under fascism, and would only be fully developed under socialism (Kuznick 1987; Werskey 1978). They believed that scientific and medical knowledge were themselves value-free, but that the *uses* of science were determined by the structures of social and economic power. Capitalism thus thwarted the socially beneficial role of science by forcing it to serve the ends of private profit and military production rather than human needs. Science and technology—the forces of production—were the main motor of history; the contradiction between the development of these productive forces and outdated social relations would eventually lead to a new mode of production under socialism.

Most contemporary radical and Marxist analysts, more critical of science, technology, and medicine, have abandoned this view of the neutrality of scientific and medical knowledge and with it the belief that the contradiction between technological developments and capitalist social relations will lead inevitably to a socialist future (Navarro 1986). Instead, medical knowledge is seen as itself socially constructed, its content reproducing the ideological power relations within any given society, and reflecting struggles over class, gender, and racial divisions. In this view, the class struggle ultimately determines both the form of medical knowledge and larger social transformations; medicine itself is not neutral but carries both liberating and repressive functions. Different positions on the politics and epistemology of science may in part account for the surprising range of opinion about Sigerist's politics; he has been variously described as a liberal, a radical reformer, a Fabian, a socialist, a Marxist, a communist, and a "twentieth-century philosophe" (e.g., Frankenberg 1974; Terris 1975; Vescia 1979; Rosen 1958a).

## Sigerist's Analysis of the History of Disease

Sigerist (1938) repeatedly stated that the history and geography of disease were the foundation of all medico-historical work and that historians could not fully understand medical theory and practice unless they were familiar with the common disease problems of the relevant period and place. Take one example: To understand the significant role given to the spleen and black bile in the theory of the four humors, one needs know that the theory was elaborated in a region of endemic malaria, where people's enlarged spleens could easily be felt through the skin. The history of disease was also an essential part of the history of civilization. A history of civilization that failed to investigate disease problems would at best be incomplete; health and disease were intimately related to wars, famines, and the fates of nations, and also to art, culture, religion, and philosophy. Studies in the history of disease, said Sigerist, should aim to illuminate the relation between disease and civilization, between social and biological existence.

Sigerist returned to the problems of civilization and disease throughout his scholarly career. His first papers were written at the Karl-Sudhoff-Institut für Geschichte der Medizin in Leipzig, where he succeeded Karl Sudhoff as professor of the history of medicine in 1925. At Leipzig, he had already declared that the history of medicine should play the role of mediator between scientific medicine and the humanistic tradition: "The medical historian should help prepare the ground for a new humanism which will harmoniously unify the old humanism with modern science" (Thom and Karbe 1981, 18; Sigerist 1922, 12). Members of the *Kykelos* group who worked in the institute saw the history of medicine as a means to clarify current problems of medicine; their interests ranged from the history of disease, to philosophical problems of medical theory, to ethical issues of medical practice (Thom and Karbe 1981).

### *Disease as a Cultural Expression*

Sigerist wanted to tie the history of medicine to larger patterns of culture and cultural transformation. In this search, he was influenced by the great cultural historian Jacob Burckhardt, by the art historian Heinrich Wölfflin, and by other German historians interested in the

relation of disease to economic, political, philosophical, and religious influences (Rosen 1958a, 1958b). He was attracted to Spengler's concept of cultural morphology—the idea that all aspects of a culture reproduced the same structural themes—but later adopted a more flexible relativism in viewing all cultural manifestations of a period as expressions of its “style” (Temkin 1958, 490). Sigerist's (1928a) essay on William Harvey, for example, showed that Harvey's work on the circulation of the blood and the baroque artists' contemporary style displayed a common preoccupation with movement. Sigerist (1928b) also argued, less successfully in Temkin's view, that the forms of disease prevalent in any period were culturally determined and reflected the “style” of that period.

Many of Sigerist's early associations between forms of civilization and disease now seem abstract and metaphoric. Although he clearly intended the connections between disease and civilization to be more than metaphors, he did not specify the mechanisms relating specific disease problems to cultural forms: the nature of the connection remained unclear. Thus, Sigerist described the plague of Justinian as a symptom of the crisis affecting the Mediterranean world in the sixth century A.D., and as an expression of the struggle between a dying culture and one striving to emerge (Rosen 1958a, 508). Sigerist saw tuberculosis as a pathological expression of the romantic period (an idea that René Dubos and Susan Sontag would later elaborate in considerable literary detail [Dubos and Dubos 1952; Sontag 1977]). He saw industrial diseases, nervousness, and neuroses as the pathological expression of nineteenth-century industrialization—again, a familiar and plausible notion at the metaphorical level (Sigerist 1932a, 180).

Throughout his later work, Sigerist would return to the idea that diseases reflected the cultural style of a period. In *Civilization and Disease*, for example, he says:

It is interesting to see that there is a certain relation between the prevailing diseases of a given period and their general character and style. The Middle Ages was a period of collectivism and the dominating diseases were such collective diseases as leprosy, plague, or dancing mania that befell entire groups. In the highly individualistic Renaissance, syphilis was in the foreground, a disease that does not attack just anybody, but is acquired through a highly individualistic act. The Baroque period was one of tremendous

contrasts and contradictions. . . . The diseases most frequently pictured were deficiency diseases such as hunger-typhus and ergotism, and luxury diseases such as gout and dropsy (Sigerist 1943, 186).

Sigerist's first effort to link disease to civilization was thus abstract, symbolic, and idealist; gradually, it would be supplanted by a more materialist conception of disease causation.

### *Disease as an Environmental Response*

In *Man and Medicine*, developed from his introductory lectures for medical students in Leipzig, Sigerist (1932a) made two arguments, one physiological, and one epidemiological, that would continue to structure his future work on the history of disease. From a physiological point of view, he stressed the basic permanence and biological identity of disease processes. Disease, he said, is as old as life itself, and is manifested in the same basic forms at all times: "For disease is after all nothing more than life, life under altered circumstances. Disease occurs as the result of the effect upon the organism of stimuli which exceed the limits of its adaptability" (Sigerist 1932a, 172).

By contrast, Sigerist's (1932a, 173) epidemiological view emphasized the widely varying incidence of particular diseases over time and space: "Nothing could be more false than to assume that the diseases that we observe in our society today existed universally and at all times in the same intensity and the same distribution." Sigerist saw disease as a biological phenomenon that reflected an organism's inability to adapt to elements in its environment. But the actual occurrence of disease in time and place was a product of existing social conditions. Disease is thus a real pathological phenomenon, but is socially induced. Disease may be seen as an indictment of the physical and social environment, the organism's expression of distress. Studies of the history and geographical distribution of specific diseases can therefore provide tools for social criticism; disease is the sign of a social and physical environment's exceeding the limits of health—the physiological adaptive capacity of the human organism.

Sigerist tried to promote historical and geographical studies of disease soon after his arrival in the United States in 1932, where he had been appointed successor to William Henry Welch as professor

of the history of medicine at the Johns Hopkins Institute of the History of Medicine. In "Problems of Historical-Geographical Pathology," Sigerist (1933) suggested a dialectical relation between civilization and disease: civilization has solved certain disease problems and has promoted health, but it has also created new hazards and thus the emergence of new diseases. With his usual ambitious scope, Sigerist now proposed an international journal for historic-geographic pathology, a series of monographs on the history and geography of the different diseases, and an atlas that would show the distribution of disease in time and space. This grand design for a research program was, however, never realized.

### *Disease as a Social Product*

In Sigerist's early work, the idea that disease was created by social and economic conditions was present, but submerged. In the United States in the 1930s, this theme began to assume a more central importance in his writing. Economic collapse, poverty, and unemployment were devastating experiences for the United States after the optimism and prosperity of the 1920s; for Sigerist and others aware of the rise of fascism and the growing threat of a world war provoked by imperial ambitions, the future of civilization was at stake. Sigerist now began to pay closer attention to the social and economic organization of society and its specific impacts on people's health, and he began to stress the significance of poverty and malnutrition as a major cause of disease, indeed, as *the* major cause of disease. In the United States, he was struck by the discrepancy between medicine's highly developed technical capacities and the very limited access to health care available to the working class (Thom and Karbe 1981, 25).

Sigerist began to pay more attention to working conditions, occupational diseases, and industrial accidents as a cause of ill health among the working population in Europe and the United States. In 1936, he surveyed the "Historical Background of Industrial and Occupational Diseases" and stated that, while civilizations were valued according to their artistic achievements, the "blood and tears of thousands of human beings" who labored to build those monuments were too often forgotten (Sigerist 1936). From the point of view of human health, the working conditions of each period and country should be an important criterion for judging its civilization. In that same year,

Sigerist wrote several times to George Rosen, encouraging him to study the history of occupational diseases, and suggesting a monograph on the diseases of miners (Visel tear 1978). Seven years later, Rosen (1943) published *The History of Miners' Diseases: A Medical and Social Interpretation*, for which Sigerist wrote the introduction. From the mid-1930s, while engaged in a multitude of scholarly activities, Sigerist also became increasingly active in antifascist movements, such as the Medical Bureau to Aid Spanish Democracy, the Federation of Faculty Committees for Aid to the Spanish People, and the American Committee for Democracy and Intellectual Freedom; he was national sponsor of the American Association of Scientific Workers, a progressive organization of radical and left-wing scientists (Beeson 1966; Sigerist 1934b).

Soon after his arrival in the United States, Sigerist had published *American Medicine* (1934a). In the epilogue to that volume, he declared that the United States and the Soviet Union would determine the future of medical care. The contrast between their political and economic structures allowed him to relate their different forms of medical care to differences in their social structures and political philosophies. Sigerist had first become interested in Soviet medicine at Leipzig through personal acquaintance with a Soviet historian of medicine, Ilya Davidovič Strašun (Thom and Karbe 1981, 26). He now began to discuss the organization of capitalist and socialist societies and to prepare for a projected trip to the Soviet Union by extensive background reading and language studies.

In 1935, 1936, and 1938, Sigerist spent his summers travelling in the Soviet Union; he returned highly enthusiastic about the Soviet reorganization of medical care and the effort to integrate preventive and curative medicine (Sigerist 1937, 1947). These experiences in the Soviet Union undoubtedly strengthened his vision of the future of medical care, the need for national organization and financing of health care services, and the extension of services to the whole population. They also strengthened his conviction that social and economic conditions were largely responsible for ill health and disease. In *Socialized Medicine in the Soviet Union* (1937), for example, he expanded his definition of the "diseases" caused by economic conditions. In addition to stressing the need for protecting the health of industrial workers, he outlined a broad new category of "social diseases" caused by poor economic conditions (Sigerist 1937, 217). He had earlier termed tuberculosis a "disease of romanticism," but now redefined it as a



disease generated by unhealthy living and working conditions. Where he had earlier viewed venereal diseases as an expression of Renaissance individualism, he now saw these diseases as linked to prostitution, in turn caused by poverty, unemployment, and lack of economic opportunities for women (Sigerist 1937, 228). He now defined alcoholism as a disease of misery: poor living conditions, a sense of oppression, and a lack of educational and recreational facilities drove men to drink. He defined crime, too, as a social disease, caused by poverty, unemployment, and frustration. The "treatment" for crime was full employment and reeducating criminals for work in labor communes. (Sigerist [1937, 235–36] reported favorably on one visit to a labor camp in the Soviet Union where 5,000 former thieves and their families were manufacturing skis, tennis rackets, and footballs.)

The Soviet Union seemed to offer a vital alternative to the stagnation of a depression economy in the United States. It demonstrated an unprecedented rate of economic growth, generating more jobs than there were workers to fill them; at least to sympathetic observers, centralized planning offered a rational alternative to the economic disorganization of capitalism in crisis. Sigerist was not the only enthusiastic observer of the "great social experiment" of the Soviet Union; Karl Compton, chairman of President Roosevelt's Science Advisory Board, praised Soviet scientific achievements (Kuznick 1987, 126; Compton, 1935); Arthur Newsholme, former head of the public health service in England, and John Adams Kingsbury, secretary of the Milbank Memorial Fund, wrote favorably about Soviet medicine (Newsholme and Kingsbury 1933); and Beatrice and Sidney Webb, the British Fabians, declared that the Soviet Union had ushered in a "new civilization" (Webb and Webb 1936). Sigerist's work on the Soviet Union aroused considerable public interest; he was deluged with invitations to address both medical and popular audiences in the late 1930s.

In "The History of Medical History" Sigerist (1938), again argued that the incidence of particular diseases depended on social, economic, and geographic factors. Since social, cultural, and economic factors had so profoundly altered health conditions, the historian of medicine must first acquire a thorough knowledge of social and economic history:

When we study the history of disease we will soon find that its incidence is determined primarily by the *economic and social conditions*

of a society. . . . The mode of production and the working conditions are largely responsible for whether a man's life will be healthy or not. . . . In other words: we must be thoroughly familiar with economic and social history before we can approach the history of disease (Sigerist 1938, 179–80).

In *Civilization and Disease*, Sigerist showed how disease was related to such influences as hunger and diet, clothing, housing, water supplies, sanitation, and working conditions. Drawing on his observations in the Soviet Union, he advocated adequate rest and recreation for the working population, paid annual vacations, wages sufficient for a good basic standard of living, periodic health examinations, and comprehensive facilities for treating minor ailments as well as serious diseases: "Steady employment under the best possible hygienic conditions, the correct balance between work, rest and recreation, and wages that permit a decent standard of living—these are basic and significant factors of public health" (Sigerist 1943, 55).

While civilization had, in general, led to rising standards of living and improvements in health conditions, this was not universally the case. Sigerist's travels in South Africa persuaded him that, for those subjected to colonial exploitation, civilization had meant a decline in standards of living, and especially a decline in nutritional standards relative to "primitive" society.

Under the most different climates primitives devised a balanced diet. . . . The great deal of malnutrition among them today is the result of prevailing social and economic conditions, the consequence of colonial exploitation. As long as the Bantu were in possession of their homeland, they had a balanced diet consisting chiefly of milk, mealy meal (ground African corn), and indigenous herbs. Once the white man took their land away and they were reduced to living on small overstocked farms, the cows had not enough milk, the land produced not enough corn, and the people in contact with the white man forgot the use of herbs (Sigerist 1951, 147).

Similarly, Sigerist noted that, while Herodotus had considered the Egyptians among the healthiest of men, Egypt in 1938 had one of the highest recorded death rates in the world. Had Herodotus been wrong? Sigerist argued that health conditions had objectively deteriorated because the population had doubled, methods of cultivation had remained primitive, and much fertile land had been turned over

to the production of such export cash crops as cotton. The result was nutritional impoverishment for the majority and lowered standards of health (Sigerist 1951, 223). "Civilization" could thus mean immiserization, poverty, and ill-health, just as it could lead to health, wealth, and happiness.

### The Physician's Task: The "People's War" for Health

If, as Sigerist had often stated, the problems of disease were primarily caused by social and economic conditions, what were the implications for the future of medicine and for the task of the physician? Were physicians simply to treat the symptoms consequent upon social problems or were they to deal with the prevention of disease at its source? Sigerist was not content solely to analyze the history of disease; his aim was to transform and improve the present. But his program for dealing with disease problems and his agenda for the "new physician" seem to have combined two largely distinct and possibly incompatible strategies. If disease incidence was created by social and economic conditions, then the solution must involve social, economic, and political changes. Here, Sigerist took inspiration from Rudolf Virchow and the German health movement of 1848, although he was critical of that movement for failing to involve the mass of the population in the struggle for health.

Sigerist frequently cited two declarations from Virchow's journal, *Die medizinische Reform*: "The physicians are the natural attorneys of the poor, and social problems fall to a large extent within their jurisdiction," and, "Medicine is a social science, and politics is nothing else but medicine on a large scale" (Sigerist 1941, 93). The physician who is close to the people knows social conditions better than anyone else and must therefore be committed to social reform:

The social causes of illness are just as important as the physical ones. Etiological therapy means more than killing a few bugs. The medical officer of health and the practitioners of a distressed area are the natural advocates of the people. They well know the factors that paralyze all their efforts. They are not only scientists but also responsible citizens, and if they did not raise their voice, who else should? (Sigerist 1941, 134).

The physician's role in the case of occupational health was not simply to treat sick workers but to fight for the reduction of working hours, the provision of adequate rest and recreation, and the improvement of wages and working conditions. Sigerist believed that physicians should take a leading role in the workers' struggle for better working conditions:

The physician . . . who is familiar with [working] conditions and knows the evil effects of such work on the people's health must assume leadership in the struggle for the improvement of conditions. His concern is not whether an enterprise is profitable or not. His place is with the workers, whose protector he is (Sigerist 1941, 133).

Internationally, the people of the poorer countries of the world had to organize and fight for better social and economic conditions. These countries were plagued by preventable diseases—diseases long since vanished from Europe and North America—and their populations would continue to suffer until economic conditions were transformed. The solution to their problems was more political than medical.

### The Physician's Task: A New System of Medicine

In the United States in the 1930s, the medical world was deeply embroiled in controversies over the organization and financing of medical care. Liberal and progressive reformers agreed that medical care was a poorly distributed social good that should be made available to all the American people at a price they could afford. The majority final report of the Committee on the Costs of Medical Care (1932) recommended that medical care be provided by groups of physicians organized around hospitals and health centers. Its costs were to be covered by group payment, financed either by insurance or taxation, thus removing economic barriers to care. This report, supported by major foundations, placed medical care organization on the national political agenda, but provoked a storm of controversy within the medical profession (Walker 1979).

Sigerist became heavily involved in the subsequent debates over medical care organization, and acted as a spokesperson for those ad-

vocating national health insurance (Beeson 1966). He saw national health insurance as a relatively conservative measure: "The idea of social insurance is by no means new but has a history of over sixty years. It is not a revolutionary but on the contrary a conservative issue. It does not tend to overthrow the existing economic order but provides a corrective mechanism that mitigates its hardships" (Sigerist 1944, 232; 1946a, 74). Sigerist supported national health insurance as the best that could be hoped for under a Roosevelt administration, but he personally favored a national health service, financed through taxation, with physicians on salary, and he enthusiastically embraced the concept of a national health program as developed by the National Health Conference of 1938.

In speaking about the need to reorganize medical care, Sigerist redefined the tasks of the physician as the promotion of health, the prevention of illness, the restoration of health, and the rehabilitation of the patient. But even this broad vision of the goals and aims of medical care failed to incorporate the social goals of full employment and the abolition of poverty that Sigerist had previously recognized as the true basis of good health.

In common with other progressive reformers, Sigerist placed more emphasis on access to medical care than on access to political power. And even when he broadened the concept of medical care to include health promotion and disease prevention, he tended to emphasize education as the route to health promotion and individualized medical attention as the route to disease prevention. The physician was to see people before they become sick and advise them how best to maintain their health (Sigerist 1946b, 73). Similarly, the statesman was to ask the physician for advice on such questions as nutrition and housing (Sigerist 1946b, 72). The shift in emphasis is significant: the physician, participant in the people's "war for health," now becomes instead an "adviser to the state" (1952a, 362).

### *The Chronic Diseases of "Old Age"*

When Sigerist spoke about the chronic diseases, he did not seem to perceive them as a consequence of environmental or industrial toxins, intense and highly pressured pace of work, people's lack of control over their work and their lives, poor nutrition, or unhealthy habits linked to social stress—all explanations that might have been com-

patible with his general orientation to the social causes of disease. Instead, he defined chronic diseases as diseases of "old age." His model for control of the chronic diseases was the model of clinical medicine, with the clinical gaze focused on the individual patient. The physician was to monitor the individual rather than the social and physical environment: "Acute diseases are no longer in the foreground, but the chronic diseases of mature and old age, those diseases that require close and steady supervision by the physician" (Sigerist 1952a, 361). When discussing chronic diseases, Sigerist emphasized supervision of the individual patient and reduced the problem of health to the problem of medical care: "We no longer accept the Greek view that health is a privilege of the rich, but agree with the medieval idea that everybody, rich and poor, should have all the medical care that science can give" (Sigerist 1941, 139).

Sigerist consistently argued that chronic illness required individual medical care rather than the community-wide public health measures appropriate to the infectious diseases of the past. "As long as acute infectious and communicable diseases dominate the scene, they will be opposed by general public-health measures, quarantine, sanitation, immunizations, and similar measures; while the chronic diseases of wear and tear call for individual services of the general practitioner and specialist, preventive and curative, and the major organizational task at such a stage is to make all such services easily available to all the people" (Sigerist 1951, 76–77).

Sigerist's discussion of chronic illness is similar to that presented by Charles-Edward A. Winslow (1923), which celebrated the move from a social or collective public health orientation to a focus on individual health. In Sigerist's understanding of public health history, the first stage of public health was concerned with removing the environmental causes of disease: providing clean water and improving the urban environment. The second stage, exemplified by the tuberculosis movement, involved both care of patients and supervision of their immediate environment. The third stage, the child hygiene movement, brought individual health examinations of school children. The next stage was meant to extend periodic health examinations to the entire adult population. Attention had thus moved from community public health to individual preventive medicine; dealing with the chronic diseases was "a question of getting hold of the individual" (Sigerist 1934a, 264).

*Clinical Preventive Medicine*

When public health focused on the individual, it became clinical preventive medicine: a personal relationship between a physician and an individual patient. Sigerist claimed that this emphasis on individual health represented not a constriction of vision but an expansion of new possibilities for action: "But today hygiene has much wider possibilities of action. In approaching the individual, in supervising him, in determining by periodic examinations his constitution, his hereditary defects, the dangers which menace him, the doctor can certainly prevent a great many diseases and can give effective care before it is too late" (Sigerist 1935, 81).

In the field of the chronic diseases, preventive and curative medicine merged in the person of the general practitioner (Sigerist 1946a, 111). Sigerist's "new physician" applied a social understanding of disease causation to the care of patients in a clinical setting: "Clinical medicine must be taught differently than heretofore. Every case must be analyzed medically and socially as to the factors that have made it possible, and conclusions must be drawn how to prevent similar cases in the future" (Sigerist 1946a, 114). The "new physician" was aided by a medical curriculum that integrated epidemiology and preventive medicine with traditional biomedical and clinical studies. Departments of preventive medicine in every medical school were to demonstrate that "preventive medicine is no longer the prerogative of public health officers but the concern of every practitioner of medicine" (Sigerist 1946a, 131).

The general practitioner moved from his or her base in a clinic or hospital out to the patients' homes and work places, and returned to consult a group of specialists at the health center for any needed help or advice. Doctors would cooperate in teams, helping to prevent illness before it struck. The new physician would be "scientist and social worker, ready to cooperate in teamwork, in close touch with the people he disinterestedly serves, a friend and leader, he directs all his efforts toward the prevention of disease and becomes a therapist where prevention has broken down—the social physician protecting the people and guiding them toward a healthier and happier life" (Sigerist 1946a, 114). The promotion of health, however, was largely an individual matter: "The state can protect society very effectively against a great many dangers, but the cultivation of health, which requires

a definite mode of living, remains to a large extent an individual matter and is the result of education" (Sigerist 1941, 103). In discussing his personal experience of chronic disease, Sigerist noted his own unhealthy mode of living: he was overweight, a heavy smoker, took practically no exercise, and often worked for seven days a week and slept for five hours a night. His personal therapy included "... a few weeks of complete rest and relaxation away from everybody, with light exercise, walks in the enchanting landscape of New York State, combined with a strict reducing diet, mineral baths, massage, nasal inhalations . . . solitude and meditation" (Sigerist 1952b, 276).

In his analyses of the history of disease, Sigerist had advocated social and economic reforms needed to adapt the environment to man's needs (Sigerist 1956). But in discussing medical reforms, Sigerist tended instead to speak of adjusting the individual to his environment: "Medicine, usually regarded as a natural science, actually is a social science because its goal is social. Its primary target must be to keep individuals adjusted to their environment as useful members of society, or to readjust them when they have dropped out as a result of illness" (Sigerist 1946b, 69).

### *The USSR: The Future of Medical Care*

Sigerist's proposals for the future of medicine are strikingly similar to his descriptions of the organization of medical care in the Soviet Union. He claimed that the Soviet health care system had abolished the distinction between preventive and curative medicine and had built the entire system around the idea of prevention; every medical worker tried to prevent disease (Sigerist 1937, 95–6). And prevention was carried out through close surveillance of each individual's health: "The general idea is to supervise the human being medically, in a discrete and unobtrusive way, from the moment of conception to the moment of death. . . . Medical supervision begins with the pregnant woman and the woman in childbirth, proceeds to the infant, the pre-school and school child, the adolescent, and finally the man and woman at work" (Sigerist 1937, 96). Disease was considered a biological process that must be dealt with scientifically: "In a society that is based on scientific principles and whose philosophy is rational, disease has lost its magical implications and is considered for what it is, a biological process that has to be faced openly without fussing and has



to be treated scientifically" (Sigerist 1937, 97–98). Especially in the case of the chronic diseases, the scientific approach often meant clinical preventive medicine and a focus on the individual.

## Science as Social Progress

Sigerist's dual vision of the physician's role—as participant or leader of the "people's war" for health and as the provider of individualized preventive and curative care—was mediated in part by the politics of the possible. If it was impossible in the current political situation to provide the basic conditions for healthy living: good food, housing, a safe work place, then the physician could at least aid the individual patient in "adjusting" to his or her social and physical environment. But Sigerist's views were also influenced by his perception of the chronic diseases as diseases of "old age" that required individual medical care more than social or environmental reforms. And Sigerist further bridged the apparent disjunction between the need for fundamental social and economic reform and the need for access to medical care by placing a very high value on science and technology, and especially on scientific medicine.

Sigerist displayed a highly positive, even uncritical view of the progress and achievements of medical science (Rosenberg 1986). The problem with medicine was not the nature of medical knowledge but the failure equitably to distribute the fruits of that knowledge: the infinite technological possibilities of medicine were constrained by market forces (Sigerist 1944, 234). The United States exemplified both this abundance of medical knowledge and the social failure to make its benefits fully available in the form of medical care.

In *Civilization and Disease*, Sigerist tried to integrate his analysis of the history of disease—as generated by social and economic conditions—and the progress of medicine—as generated by scientific knowledge. He admitted that medical science could not take all the credit for improved health conditions since the seventeenth century: they were mainly due to rising standards of living. But he tacitly denied his own point by reasserting the importance of medicine: "Civilization fights disease in many ways, but medicine nevertheless is its most powerful weapon" (Sigerist 1943, 234).

The conclusion of *Civilization and Disease* restates this longstanding

ambivalence about the relative importance of economic conditions and medical care. Sigerist argued that over one-half of the world's population lived in such atrocious health conditions that medical care is essentially irrelevant: "To immunize colonial people against disease with one hand and exploit them into starvation with the other is a grim joke" (Sigerist 1943, 236). When poverty is the chief cause of disease, the remedy must be to raise the standard of living.

For Sigerist, the answer to poverty lay in the application of scientific knowledge to agricultural production. Again, he believed that the Soviet Union could serve as a model, and that the reorganization of agriculture after the Revolution meant the end of famines and crop failures (Sigerist 1943, 9–10). Just as science could show how to improve the fertility of the soil and the quality and quantity of crops, it could also show how to distribute food and avoid starvation in the midst of plenty. In the United States, food could be abundantly produced, but could not be rationally distributed; an irrational economic system had resulted in the slaughtering of millions of animals in the midst of the depression (Poppendieck 1986).

Sigerist asserted that scientific knowledge could also be used to solve the social problems of war, poverty, and crime:

War is a social disease, like poverty or crime. When it breaks out it reminds us that we are still in the initial stages, in the prehistory of civilization, not far removed from savagery. It reminds us that although we like to play with science and kill with scientific weapons, we have not yet learned to approach the basic problems of social life—production, distribution, and consumption—scientifically (Sigerist 1941, 135).

A scientifically organized and rational society would in turn increase social interdependence; individuals would give up some liberties in favor of increased social responsibility. Here, Sigerist introduced a new disease metaphor: within a rationally organized society, excessive individualism assumes a pathological form. Individuals who insist on their freedom at the expense of the social good are like cancer cells that multiply at the expense of the rest of the organism:

As soon as a cell-group beings to lead an independent life without regard to the rest of the cells, a malignant tumor develops which will destroy the whole organism. This applies to society as well.

The more specialized, the more differentiated a society becomes, the more the individual members have to give up liberties and assume duties toward society (Sigerist 1937, 20).

Sigerist implied that, in a rationally organized society, the application of scientific knowledge and principles may appropriately replace politics. The physician becomes a scientific manager whose job is to readjust patients, or criminals, to their social and physical environment. The criminal was a sick man, in need of a physician (Sigerist 1941, 100–1).

The idea of scientific progress gave Sigerist a coherent framework for his history and his politics. Sigerist's plan to write the whole history of medicine as a single connected account would hardly have been possible without some unifying progressive theme. Oswei Temkin (1958) had objected to beginning the *History of Medicine* with a section on primitive medicine on the grounds that a description of medicine among contemporary "primitive peoples" could not substitute for the origins of medicine—about which little could be known. But starting with primitive medicine gave Sigerist the framework for an overall argument that was historical, progressive, and political: a study of uneven progress, to be sure, but nevertheless one that moved onward and upward from magic and mysticism, through philosophy, to science. The story of the scientific revolution was the story of a liberation from the "bonds of magic and religion" (Sigerist 1943, 133); from Andreas Vesalius through to the twentieth century, scientific modes of thought and understanding had penetrated ever further into medical knowledge and practice (Sigerist 1934c). Science was still young, and our knowledge incomplete, but optimism about the future was justified by the prospects of continued developments in scientific knowledge (Sigerist 1943, 178).

Sigerist's historiographical framework closely identified scientific and social progress; scientific knowledge was a motor of human progress. For him, the application of science to society was synonymous with the application of Marxist philosophy:

The philosophy of Marxism is erected upon the foundation of the natural sciences and the science of economics. It is rational. Where such a philosophy prevails, scientific research has the best possible chances of development. The two characteristic features of Soviet science are the disappearance of the distinction between theory and

practice, or between pure and applied science, and the planning of scientific research on a nation-wide scale (Sigerist 1937, 292).

Because the most effective organization of medical care was essentially a rational process, whereby a given level of medical technology was scientifically distributed, the rational reorganization of medical care in the United States should result in a system similar to that of the Soviet Union:

Once we resolve to bring health to all the people in town and country, irrespective of race, creed or economic status, I feel that the methods we develop to do so will resemble those of the USSR, despite our different social and economic structures, because, after all, the technology we use is the same (Sigerist 1947, 10).

In this reading, the level of science and technology, rather than the form of economic and political organization, determines the structure of medical care.

It will be evident from this discussion that I believe Sigerist, in common with many intellectuals of the 1930s and 1940s, overvalued the inherent progressive force of scientific and technological development and failed to see the ways in which science itself is culturally determined. Sigerist's studies of the history of disease were remarkable in linking disease to broader social, economic, cultural and political forces. I would argue that his view of the history of disease was culturally richer and more complex than his view of science. As historians of science have gained a more complex understanding of the social and cultural determinants of scientific knowledge and practice, it has been—at least in part—at the cost of the political optimism shared by Sigerist and many of his contemporaries, that scientific knowledge would lead us into a new world of reason and social equality. If we have abandoned the scientific optimism of that era, and also the uncritical faith that the Soviet Union represents perfected social justice, we may still respect and endorse Sigerist's conviction that studies in the history of medicine can help us address the broader philosophical, ethical, and political issues confronting contemporary medicine and health care.

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*Acknowledgments:* I would like to thank Charles E. Rosenberg, Gert L. Brieger, Genevieve Miller, Vicente Navarro, Robert Kanigel, Patti Lowery, and Christian Pross for their comments and suggestions on an earlier draft of this paper. For a complete bibliography of Sigerist's work, see Genevieve Miller's *A Bibliography of the Writings of Henry E. Sigerist*, Montreal, McGill University Press.

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